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## **EXHIBIT A**

**U.S. Application No. 09/509,283**  
**Marked Up Copy of Amended Claims**

71. (Amended) A monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE.

and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

76. (Amended) [The] A monoclonal antibody [of Claim 71,] that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE.

and wherein the monoclonal antibody inhibits a biological activity of the human 8F4 polypeptide.

78. (Amended) A hybridoma that produces a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;

- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE, and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

83. (Amended) [The] A hybridoma [of Claim 78] that produces a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE, and wherein said hybridoma produces a monoclonal antibody that inhibits [the] a biological activity of the human 8F4 polypeptide.

85. (Amended) A pharmaceutical composition comprising a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE.

and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates human T lymphocytes.

86. (Amended) [The] A pharmaceutical composition [of Claim 85] comprising a monoclonal antibody that recognizes a human 8F4 polypeptide or a fragment thereof, wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE.

and wherein the monoclonal antibody inhibits [the] a biological activity of the human 8F4 polypeptide.

88. A method for producing the monoclonal antibody of Claim 71 or 76, comprising: culturing an antibody-secreting hybridoma obtained by fusion of a myeloma cell line cell with a spleen cell of a mouse immunized with 2-signal-activated human T lymphocytes, such that the monoclonal antibody is produced.